DEFINING TOOTH-MOVING APPLIANCES COMPUTATIONALLY

) filed August 26, 2002, Now U.S. Patent No. 6,682,346

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] The present application is a continuation of U.S. Application No. 10/228,885, (Attorney Docket No. 18563-005010US - AT-00107.1US), which was a continuation of U.S. Application No. 09/169,034 (Attorney Docket No. 18563-005000US – AT-00107US), filed October 8, 1998, *) Now U.S. Patent No. 6,471,511*

— Pending

[0002] This application is related to commonly-owned U.S. Application No. 09/686,190, (Attorney Docket No. 018563-004810US – AT-00105.1US), filed October 10, 2000, and U.S. Application No. 09/169036 (Attorney Docket No. 018563-004900US – AT-00106US), filed October 8, 1998, now U.S. Patent No. 6,450,807, the full disclosures of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0003] The present invention relates to computational orthodontics.

[0004] In orthodontic treatment, a patient's teeth are moved from an initial to a final position using any of a variety of appliances. An appliance exerts force on the teeth by which one or more of them are moved or held in place, as appropriate to the stage of treatment.

BRIEF SUMMARY OF THE INVENTION

[0005] The present invention provides methods and apparatus for defining appliance configurations at the steps of a process of repositioning teeth from an initial tooth arrangement to a final tooth arrangement. The invention can operate to define how repositioning is accomplished by a series of appliances or by a series of adjustments to appliances configured to reposition individual teeth incrementally. The invention can be applied advantageously to specify a series of appliances formed as polymeric shells having the tooth-receiving cavities, that is, shells of the kind described in the above-mentioned U.S. Application No. 09/169276, (Attorney Docket No. 018563-004800US – AT-00105US), filed October 8, 1998. *) now abandoned.*

[0006] A patient's teeth are repositioned from an initial tooth arrangement to a final tooth arrangement by making a series of incremental position adjustments using appliances